AHPO-6/18 GOLD
PROOFER OVEN

For information or technical assistance, call:
TOLL FREE
1(800) 735-DUKE (3853)
or
1(314) 231-1130

PN 156081P

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Manufacturer's Introduction

The Duke AHPO-6/18 Proofer Oven was developed in response to Subway's need for uniform baking capabilities to provide consistently high, "just baked" bread quality as part of Subway's Gold Standard Program.

The Duke Proofer Oven utilizes Duke's unique directional convection airflow technology that provides even heat distribution and a uniform bake without the need for turning pans during the bake cycle. This enhances the quality and consistency of the baked products while reducing food scrap/waste and simplifying operating procedures.

The low profile oven won't block the view of menu boards and will easily roll through a standard height door. The oven and proofer doors are field reversible with a drip channel on the proofer door to prevent water from dripping on the floor.

Full width doors on the oven and proofer help to display and merchandise fresh baked bread to the customer.

The controls are simple to operate, there are two timers for independent timing of the proofer and oven.

The full width oven and proofer cavity will accept standard ½ size or full size sheet pans.

Supplier Name: Duke Manufacturing Co.
Address: 2305 North Broadway
St. Louis, MO 63102
Model #: AHPO-6/18
Serial #: _____
Date Received: _____
Date Installed: _____
Toll Free Telephone: **1-800-735-3853**
Fax: 1-314-231-5074
Service Referral #: _____
Local Service Name: _____
_____
Local Service #: _____

General Specifications

Model #: AHPO-6/18

Overall Dimensions
Height: 77 3/4 in./197.5cm
Width: 37 1/4 in./94.6cm
Depth: 27 1/4 in./69.2cm

ELECTRICAL SPECIFICATIONS

	208 V AMPS	240 V AMPS	TOTAL WATTS
1 PHASE	32.0	27.8	6650
3 PHASE	18.5	16.0	6650

Shipping Weight: 550lbs / 250kg

Installation Requirements
Power Connection:
1 PHASE: 8 AWG COPPER WIRE
3 PHASE: 10 AWG COPPER WIRE
NO ALUMINUM WIRING ALLOWED

!CAUTION!

All electrical connections must be in compliance with the National Electric Code, ANSI/NFPA 70-current edition or in Canada, CSA std. C22.1. and local code requirements. The circuit must be properly grounded according to the codes.

INSTALLATION

Inspect the exterior of the shipping container carefully and note any damage on the delivery receipt. Remove the shipping container and check for damage to the oven. If there is any damage file a freight claim with the carrier and call Duke at 800-735-3853.

Compare the voltage and phase from the oven specification label to the power supply for the oven and call Duke if there is a difference. If the phase is wrong, a qualified service technician can change the wire connections inside the oven to correct the problem. See the illustration on page 4 for phase conversions. If the voltage is wrong, the heat elements must be changed. Call Duke to get new elements.

Check the swing of the door. The hinge side can be changed by following the instructions on page 8. The door swing direction can be changed in the field after you have a new drip channel for the proofer door. Call Duke to get the new drip channel for the proofer door.

Put the wire racks in the oven and proofer.

START-UP

Have a qualified service technician or electrician connect the oven to the power supply. Check the door seal and make sure both doors close completely. If they do not close and seal properly, call Duke for assistance.

The light bulb covers can be removed by turning them counter -clockwise. Make sure the gasket is in place when replacing the covers. If you replace the light bulbs, make sure they are the correct voltage and a maximum rating of 40 watts. Contact Duke Manufacturing Service for long life replacement bulbs.

- Fill the proofer water pan about half full of clean water.
- Turn the oven and proofer power switches to the ON position.
- Set the oven thermostat at 350° F, the proofer thermostat at 105° F, and the proofer humidity at #3.
- All of the indicator lights should be on.
- Check to make sure that the oven and proofer fans are turning and the lights are on.
- Open the oven door. The oven fan should stop. Close the door to continue.
- Set both timers to 20 minutes and check to make sure they time down and the buzzers work.

If there are any problems, call the service department at Duke for assistance before you call a service agency. If the problem is an operator or procedural error you will be liable for the service charges.

Allow the oven and proofer to pre-heat for at least 30 minutes.

Your Duke Proofer Oven is now ready to operate.

OVEN START-UP FORM

Fax to Duke Manufacturing Co.
(314) 231-2460

Start-up Date:

Customer Name: Store Number:

Address

City State Zip

Phone

Service Company Name:

City State

Phone

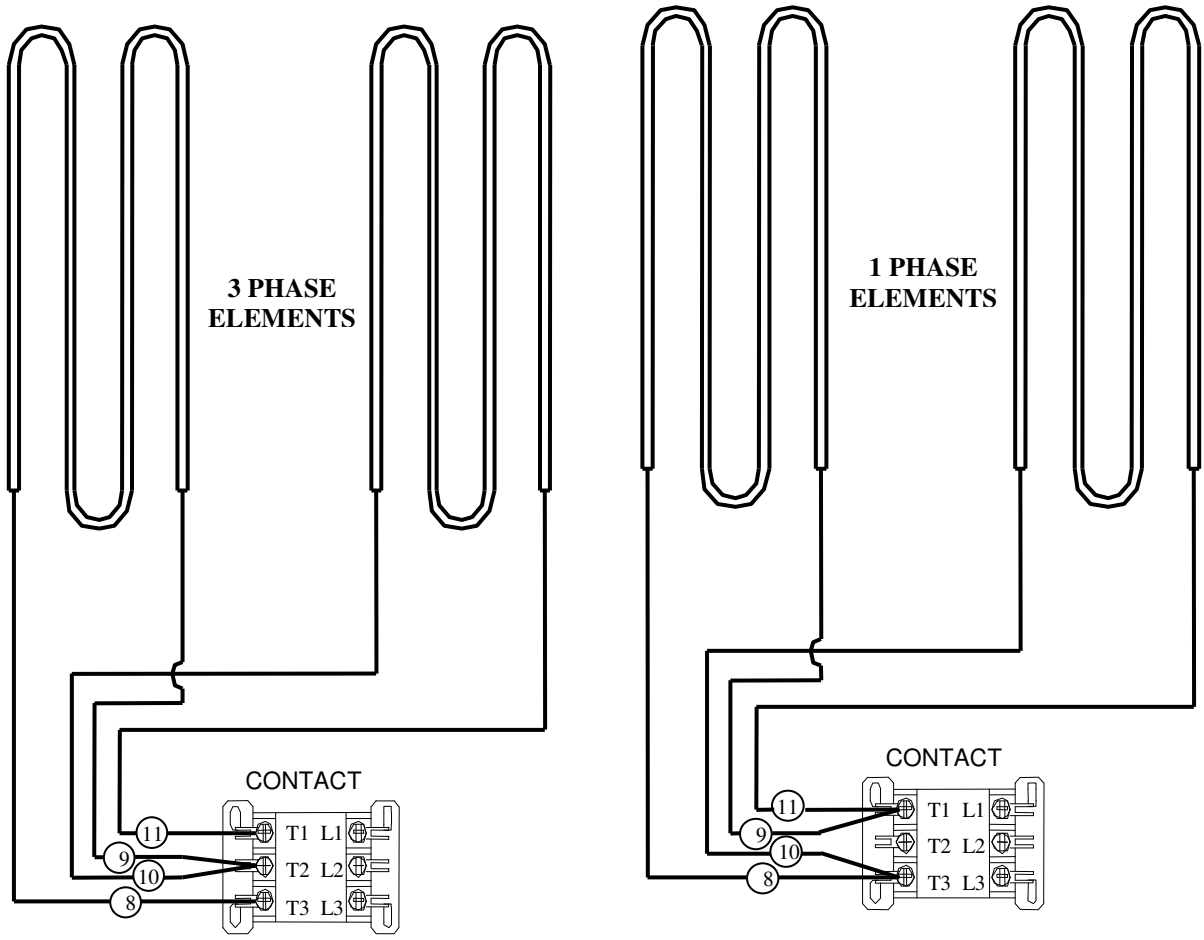
Model Number:		Serial Number:	
Factory rating plate volts and phase		Volts	Phase
Actual volts and phase		Volts	Phase
Amp draw	L1	L2	L3

Is general condition of oven acceptable?	Yes	No
If NO explain:		
Does the door open in the proper direction?	Yes	No
If NO explain.		
Does the oven door seal properly?	Yes	No
If NO explain.		
Does the proofer door seal properly?	Yes	No
If NO explain.		
Do all oven and proofer lights work properly?	Yes	No
If NO explain.		
Do all indicator lights work properly?	Yes	No
If NO explain.		
Is the oven temperature within 10ºF of the actual setting?	Yes	No
If NO explain.		
Is the proofer temperature within 5ºF of the actual setting?	Yes	No
If NO explain.		
Are the oven and proofer fans operating properly?	Yes	No
If NO explain.		
Is the door switch operating properly?	Yes	No
If NO explain.		
Are the timers operating properly?	Yes	No
If NO explain.		

Signature of Store Representative:

Signature of Service Technician:

Phase Change Wire Diagrams



!! DANGER !!

A qualified service technician must complete this procedure. Access to electrical parts is hazardous and could cause serious injury or death.

1. **Disconnect the oven from the power supply.**
2. **Remove the access panel on the right side below the oven.**
3. **Locate the contactor on the rear control compartment surface.**
4. **Change the location of the heat element wires on the contactor to match the appropriate diagram above.**
5. **Replace the access panel and connect the power supply.**
6. **Check the oven and proofer for proper heating, current draw, and voltage.**

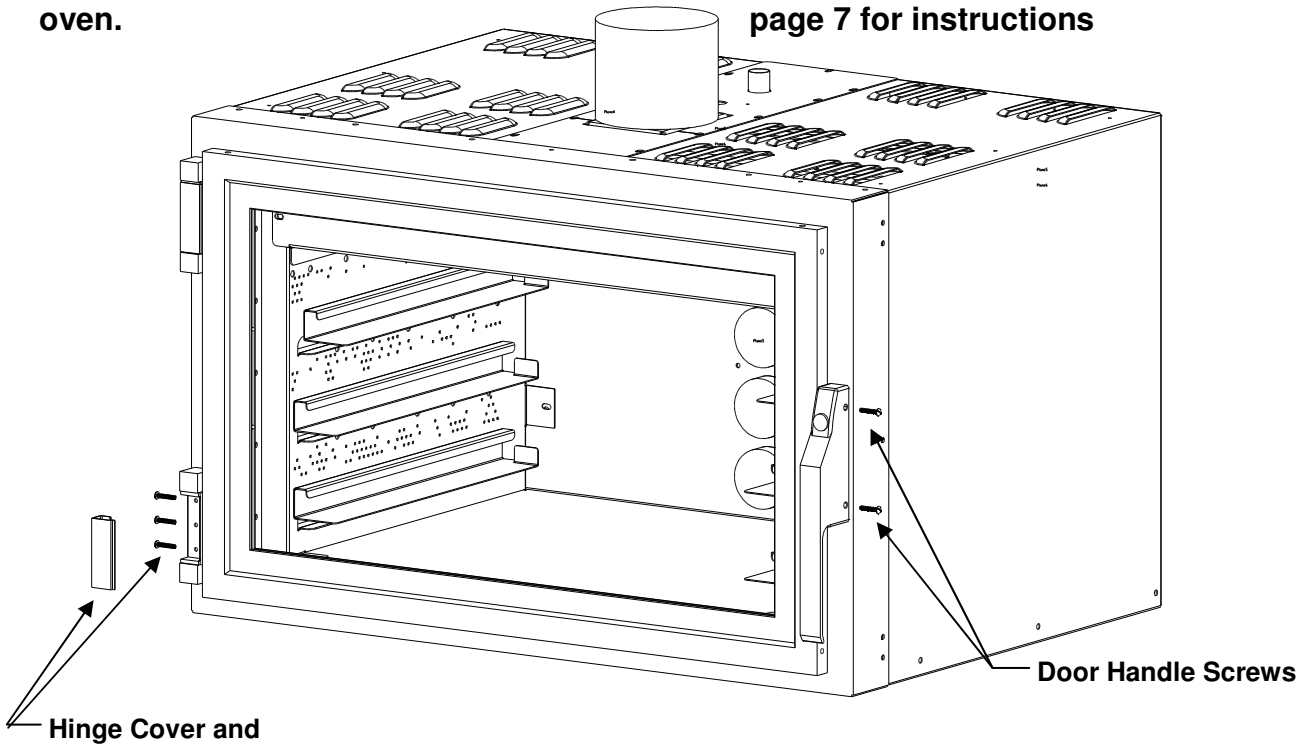
Door Adjustments & Gasket Maintenance

Reversing Oven Door Swing Direction

NOTE

If you reverse the Proofer door you must have the reverse drip channel for the bottom of the door. Call Duke at 800-735-3853 to order the drip channel before you reverse the door swing.

1. Remove cover from hinges to expose the screws that hold the hinge to the front of the oven.
2. Remove the hinge screws and door from the oven.
3. Remove the door handle screws and flip the door handle over and replace it on the door.
4. Remove the six screws on the front of the oven to expose the hinge screw holes for the other swing direction.
5. Use the six screws to fill the unused hinge screw holes on the front of the oven.
6. Remove the latch strike plate from the front of the oven and move it to the other side. Use the screws from the other side to fill the screw holes that are no longer used.
7. Position the door on the front of the oven and tighten the hinge screws. Make sure the door is level with the oven body before the screws are tightened permanently.
8. Adjust the door gasket seal. See page 7 for instructions

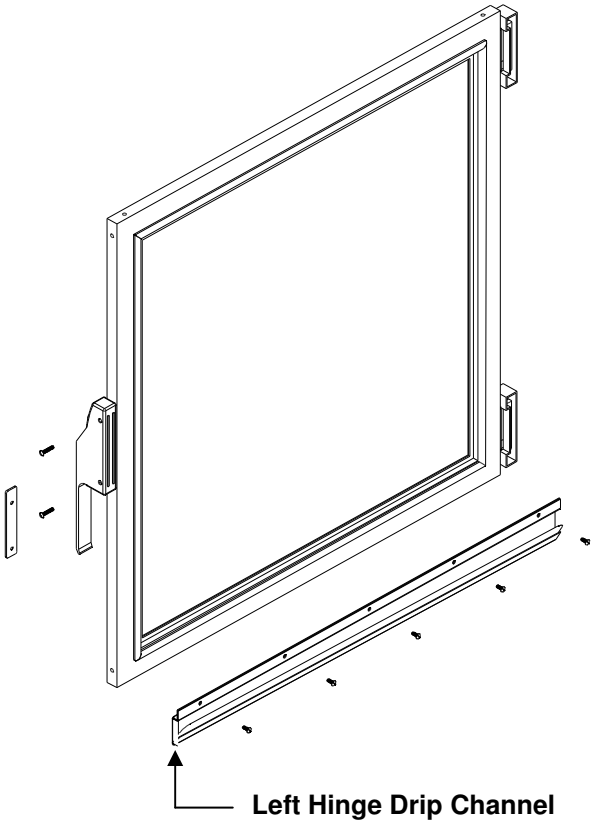


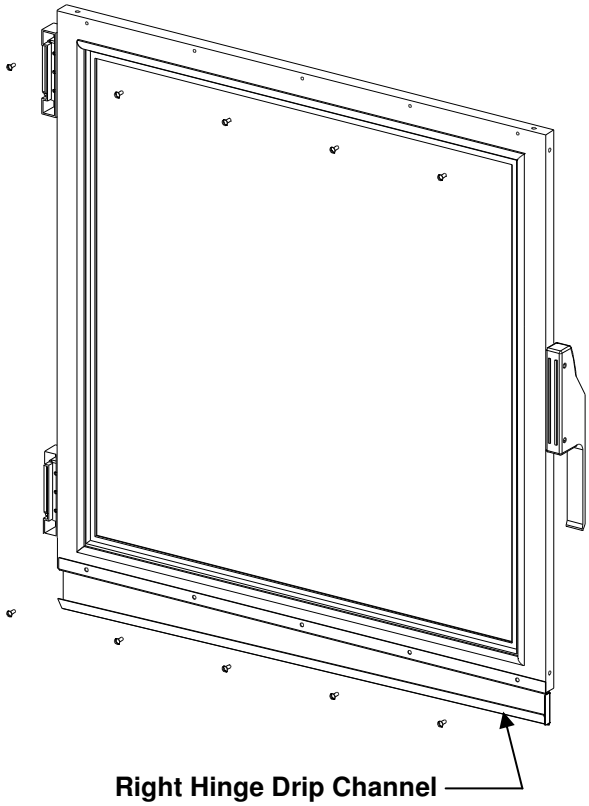
Door Adjustments & Gasket Maintenance

Proofer Drip Channel Reversal

The proofer door has a sloped drip channel on the bottom that directs any water that drips down the door into the water pan below the door. When the door swing is reversed this drip channel must be replaced with a new channel that has the slope in the proper direction. Contact Duke Manufacturing Service for a new drip channel before changing door swing direction.

1. **Follow the directions for removing the door on the last page. When the door is off you can then replace the drip channel.**
2. **Remove the screws that hold the drip channel on and remove the drip channel. Use the same screws to fill the empty holes after the drip channel is off.**
3. **Locate the new drip channel on the other end of the door. Make sure that the slope is directed to the hinge side of the door.**
4. **Fasten the drip channel to the door with the self tapping screws provided with the new drip channel.**
5. **Follow the directions for mounting the door on page 5.**



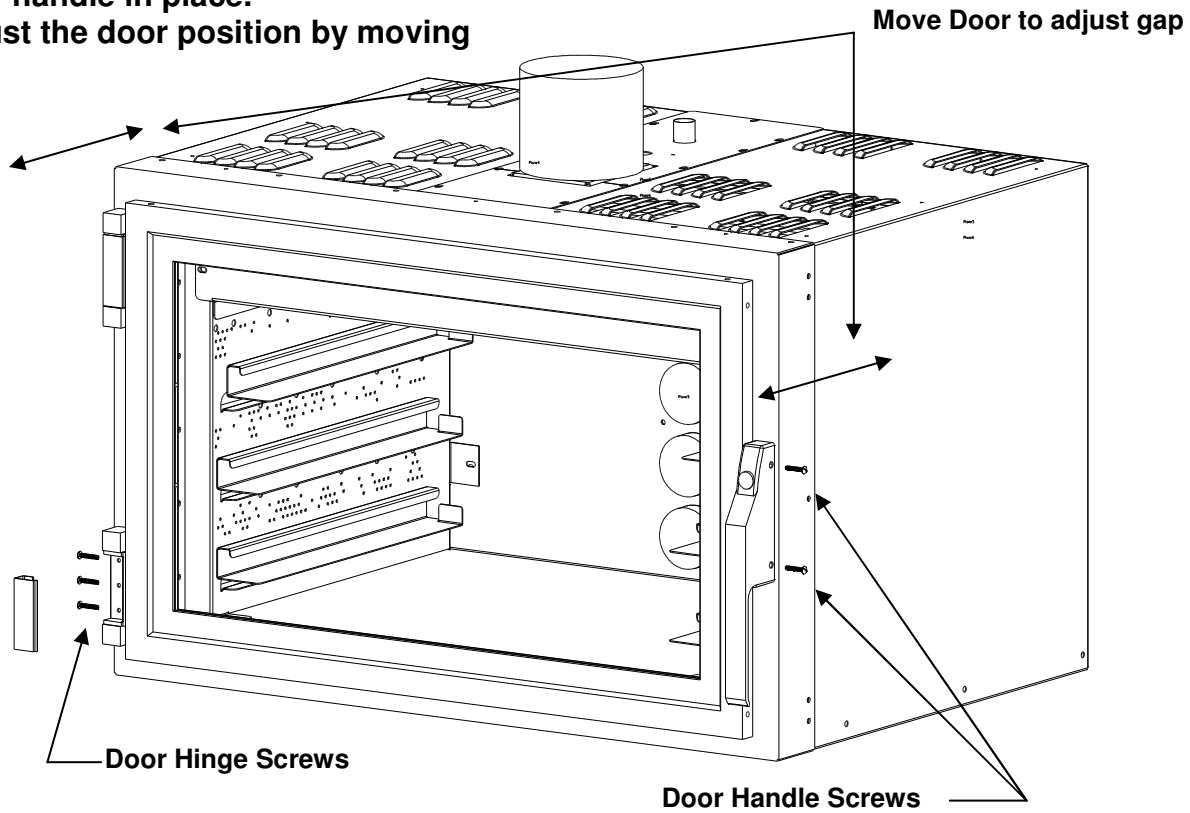


Door Adjustments & Gasket Maintenance

Door Gasket Leak Adjustments

The doors should be checked for leaks every three months. The adjustment can be made by following the instructions below. If the door gasket is damaged, or compressed permanently, it should be replaced. Call Duke Manufacturing Co. at 800-735-3853 to order a new gasket before making adjustments.

1. **With the door closed, remove the hinge covers with a screwdriver and loosen the six screws that hold the hinges to the door.**
2. **Adjust the door position by moving the door frame in or out to seal any gaps between the gasket and the oven front. Be careful not to compress the gasket too much, it will cause the door to bind up on the hinge side.**
3. **When the door is positioned, tighten the hinge screws.**
4. **Loosen the two screws that hold the door handle in place.**
5. **Adjust the door position by moving the door frame in or out to seal any gaps between the gasket and oven front.**
6. **When the door is positioned, tighten the door handle screws.**
7. **To check the adjustment, close the door with a dollar bill between the gasket and front of the oven. You should feel resistance when you try to pull the dollar bill out with the door closed. Do this check in several places and readjust the door if necessary.**

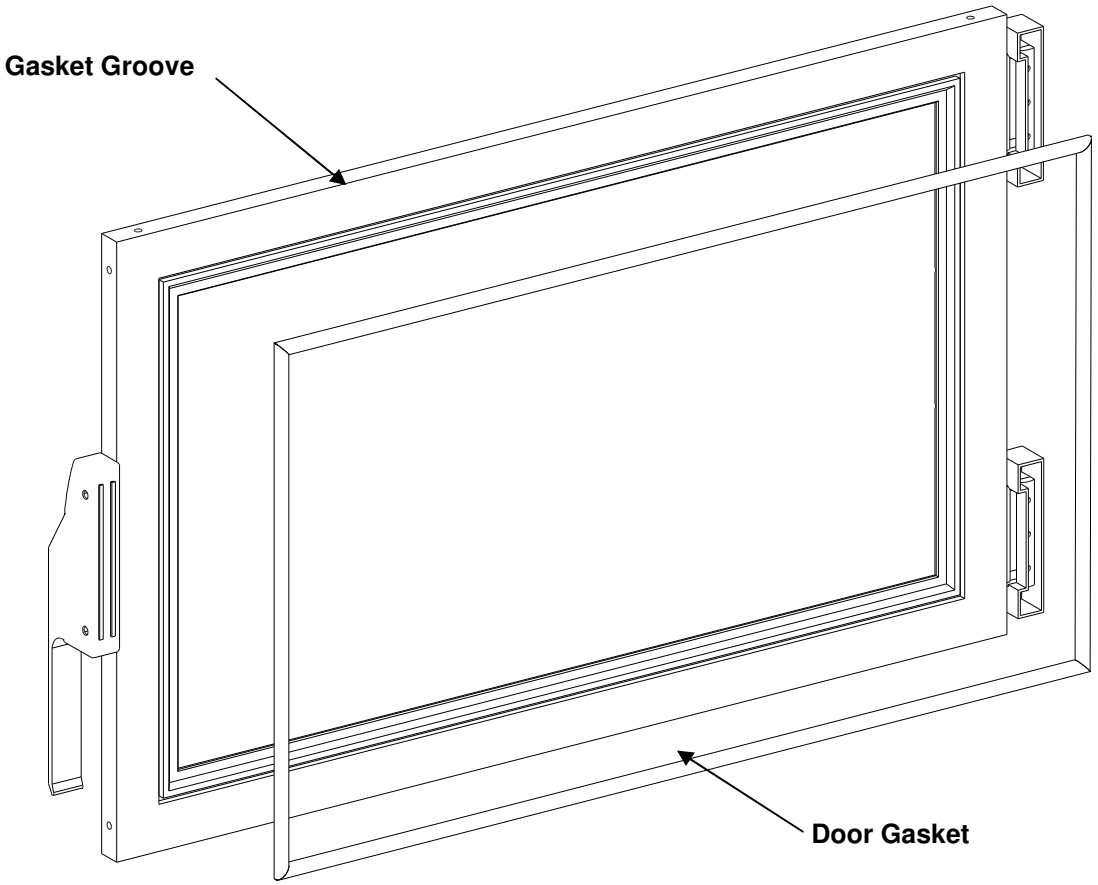


Door Adjustments & Gasket Maintenance

NOTE
If the door gasket is or damaged or overly compressed, it should be replaced. Call Duke Manufacturing Co. for a new gasket.

Gasket Replacement

1. Remove the old gasket by pulling it out of the groove in the door frame.
2. Clean the groove with a screwdriver or other flat-bladed tool to remove any dirt or gasket pieces.
3. Press the new gasket into the groove. Make sure it is fully seated in the groove and flat against the door frame.
4. Check the door adjustment to make sure there are not any leaks. Also, check that the new gasket is not compressed too much, making the door hard to close.



OPERATING INSTRUCTIONS

Proofer Operation

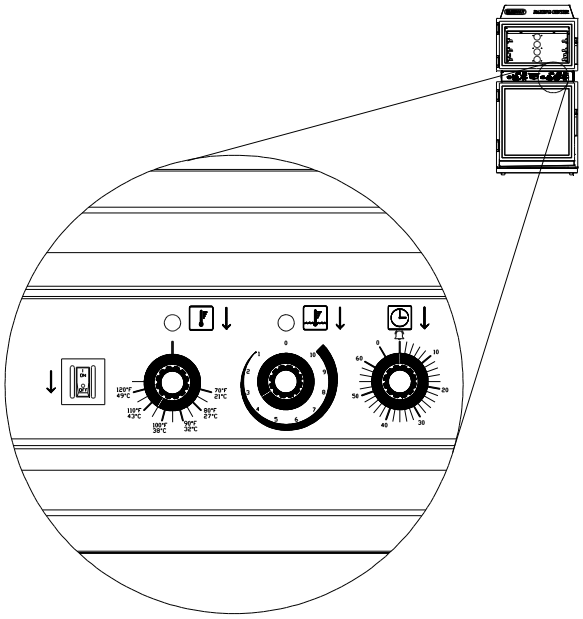
Make sure the humidity pan has fresh clean water in it. Fill it with warm water to get the best performance. A regular check of the water level is recommended during operation. Add water as required.

Turn the proofer power switch on and set the proofer heat to the desired temperature. A good starting temperature is 105 ^{0} F. The light above the heat thermostat will be on until the proofer has heated to the set temperature. You may need to adjust this temperature depending on your results. Do not turn on the proofer humidity at this time.

After the proofer has been heating for 20 minutes, turn the humidity switch to a setting of #3 or 4. You may need to adjust this setting depending on your results. When a light fog appears on the door glass the proofer is ready to load with dough. The humidity setting is too high if water is running down the door glass. If the door glass does not fog then the humidity setting is too low.

Load the proofer with bread dough and set the timer for 50 - 60 minutes. You may need to adjust the time depending on the type of dough and your results. When it rises to 75 - 80 % of it's final size, it is ready to bake. Since the proofer can hold more pans of bread than the oven can bake, stagger the loading in increments of the oven bake time. This will prevent over proofing of the bread remaining in the proofer after the first load is moved to the oven.

If there is excessive humidity on the door glass it is probably caused by a humidity setting that is too high or by having the humidity on when there is no dough loaded in the proofer. Turn the proofer off and remove the bottom panel. Remove excess water that has accumulated in the bottom of the proofer.



DO NOT…

- ***Run the proofer humidity without a load of dough.***
  It is OK to leave the proofer heat on to maintain the temperature, but turn the humidity off if the proofer is empty.

- ***Let the dough dry out while it is thawing.***
  Dough that is too dry will not fully rise in the proofer and may crack.

- ***Over-proof the dough***
  Excessive proofing will cause the bread to collapse after it has been baked. Make sure to adjust the proofing time to prevent over-proofing.

- ***Under-proof the dough***
  If the bread is under-proofed it will not bake to the proper finished size and will have a dense cell structure.

- ***Proof frozen dough***
  Make sure the dough is thawed properly before loading it into the proofer. The dough should be soft and moist with the center thawed.

DO…

- ***Watch the proofing process carefully and make adjustments if necessary.***

OPERATING INSTRUCTIONS

Oven Operation

Turn the oven on and set the temperature to 350 ^{0} F for bread and for Deli rolls. If this is done right after the proofer is loaded with the first load, the oven will be ready to bake when the first load is ready from the proofer.

The oven preheat time should be from 20 to 30 minutes. The oven door should be closed, except during loading and unloading. Load the oven quickly to reduce heat loss.

Load the oven with 6 pans of bread and set the bake timer. The bake time can be adjusted to get the desired color of the baked bread.

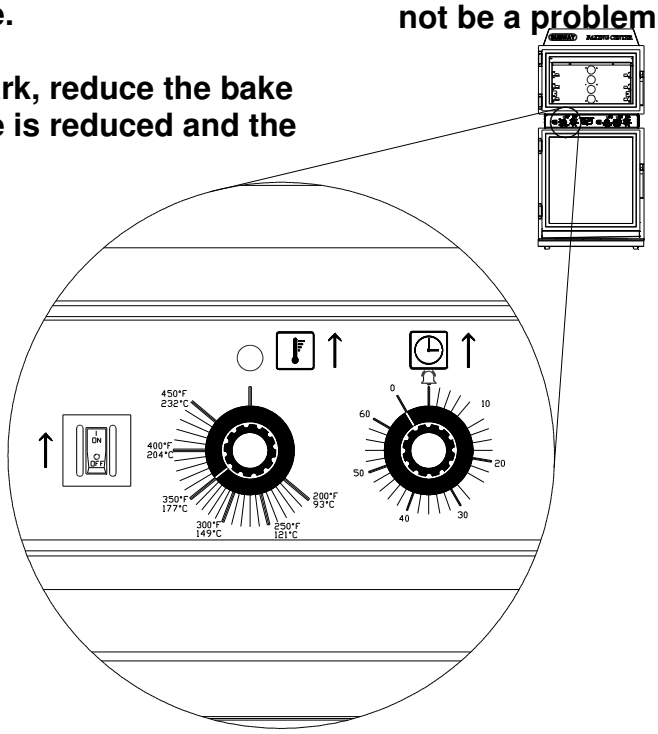
If the baking results are uneven or too dark, reduce the temperature and extend the bake time.

If the bread is too dark, reduce the bake time. If the bake time is reduced and the bread is still too dark then reduce the temperature 15° F and try baking for a longer period of time. The same procedure can be used to bake Deli rolls.

If you are baking partial loads try to center the pans in the oven and start loading the oven starting at the bottom shelf and working up to the top.

Cookies are baked at 325° F and are loaded in the oven the same way as bread and deli rolls.

Keep in mind that opening the oven door allows heat to escape. If the door is left open too long it could affect the performance of the oven. Under normal conditions of loading the oven this will not be a problem.



Oven and Proofer Temperature Check

If the oven or proofer temperature calibration seems to be wrong, it can be checked before a service call is made. It is important to follow the correct procedure to get an accurate reading. If the calibration is off it is recommended that you first call Duke Manufacturing Co. and talk to the service department before you schedule a service call. Calling Duke first can save you time and money by eliminating other problems before a service call is made.

The most important concern with temperature measurement is the accuracy of the thermometer and the location in the oven cavity. Duke recommends an electronic temperature meter with a wire thermocouple.

1. **Place the thermocouple in the exact center of the oven cavity. It can be fastened to the center of the middle wire shelf.**
2. **Start the oven and set the temperature control for 350° follow the oven to pre-heat for at least 45 minutes.**
3. **While watching the heat light on the control panel, note the maximum and minimum temperatures through several cycles.**
4. **The average temperature of several cycles is the calibration temperature. It is normal for this temperature to have a variance of +/- 10° F.**
5. **The same steps can be used to check the proofer temperature. The temperature control should be set for 105° F and the normal variance is +/- 5° F**
6. **Loosen the small allen set screw on the side of the knob. Adjust knob to the calibration temperature reading and tighten setscrew. Use the same procedure for the proofer.**

OVEN AND PROOFER TROUBLESHOOTING

Problem	Yes	No
1. Oven does not heat with oven switch in the ON position and Oven Temperature not set at 0°.		
a. Are oven lights on?	Observe Oven Fan. Go to b.	Check Proofer Operation. Go to c.
b. Does Oven Fan work?	Call Duke Service.	Check Proofer Operation. Go to c.
c. Does Proofer work?	Ensure Oven Door is Closed. Go to d.	Check Supply Circuit Breaker. Go to e.
d. Is Oven Door Securely closed?	Call Duke Service.	Close Door securely. Go to g.
e. Is Supply Circuit Breaker tripped?	Reset Circuit Breaker. Try oven again. Go to g.	Check Fuses on Control Panel. Go to e.
f. Is Oven Breaker Switch tripped?	Reset Oven Breaker Switch. Go to g.	Call Duke Service.
g. Does oven work?	Troubleshooting complete.	Call Duke Service.
2. Proofer does not heat with Proofer Switch in the ON position Proofer		
a. Are Proofer lights on?	Observe Proofer Fan. Go to b.	Check Oven Operation. Go to c.
b. Does Proofer Fan work?	Call Duke Service.	Check Oven Operation. Go to c.
c. Does Oven work?	Call Service Technician.	Check Supply Circuit Breaker. Go to d.
d. Is Supply Circuit Breaker tripped?	Reset Circuit Breaker. Try Proofer again. Go to f.	Check Fuses on Control Panel. Go to e.
e. Is Proofer Breaker Switch tripped?	Reset Proofer Breaker Switch. Go to f.	Call Duke Service.
f. Does oven work?	Troubleshooting complete.	Call Duke Service.

OVEN AND PROOFER TROUBLESHOOTING

Problem	Yes	No
3. Oven/Proofer lights not working.		
a. Is more than one light not working?	Replace inoperative light bulbs and recheck. Go to b.	Call Duke Service.
b. Do lights work?	End of troubleshooting.	Call Duke Service.
4. Proofer Humidity not working/insufficient with Humidity Control not set to Off.		
a. Does proofer humidity appear to be working?	Adjust Humidity to next higher setting. Wait 15 minutes. Go to b.	Adjust humidity to maximum setting. Wait 15 minutes. Go to b.
b. Does proofer humidity appear to be working?	Adjust humidity to appropriate setting. End of troubleshooting.	Call Duke Service.
5. Proofer Humidity too high.		
a. Is Proofer Humidity Control set properly?	Remove proofer floor and remove accumulated water. Go to b.	Adjust humidity control to proper level. Go to b.
b. Is proofer humidity working properly?	End of troubleshooting.	Call Duke Service.

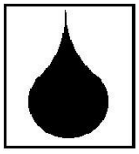
DUKE MANUFACTURING CO.
2305 N. Broadway
St. Louis, MO 62025

Toll Free 1-800-735-DUKE (3853)
1-314-231-1130
Fax 1-314-231-5074

http:\\www.dukemfg.com

CLEANING AND MAINTENANCE

DAILY



CLEANING INSTRUCTIONS

1. **Wipe down the interior and exterior of the proofer oven with warm water and mild detergent using a soft cloth.**
2. **Clean proofer water pan using mild detergent and warm water. Ensure all soap is rinsed from the oven and proofer surfaces and water pan to avoid flavor transfer to the bread.**
3. **Open the proofer door and run the proofer with the heat on for at least 30 minutes to dry it out.**
4. **Turn the proofer off, wait 10 minutes, and remove the bottom fan cover panel. Wipe up any excess water that has accumulated in the bottom of the proofer.**

!Caution!

Do not use caustic cleaners, acids, ammonia products or abrasive cleaners or cloths. These can damage the stainless steel and door gaskets.

WEEKLY

NONE

MONTHLY

1. **Check door handle screws for tightness.**

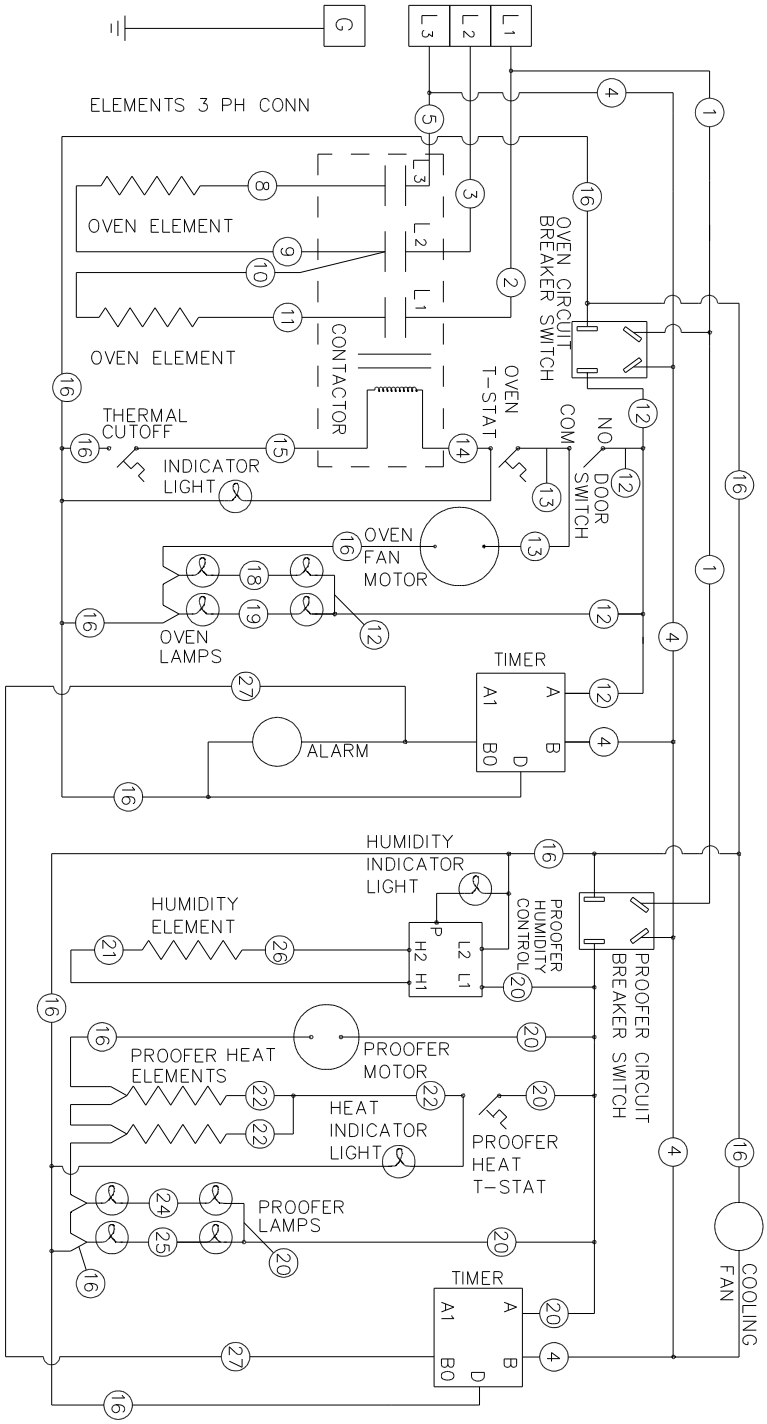
THREE MONTHS

1. **Check the door gasket seal on the oven and proofer for leaks. See the section on Door Adjustments and Gasket Maintenance for help.**

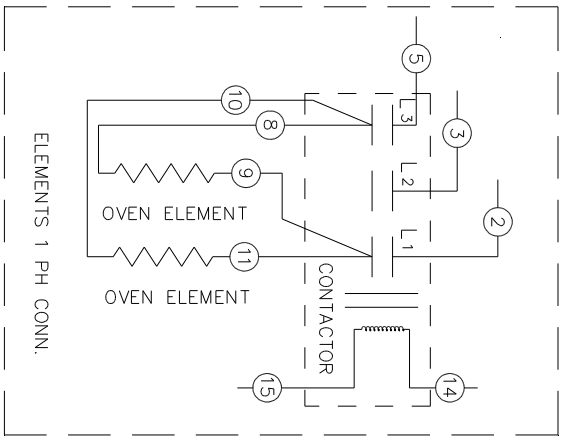
SIX MONTHS

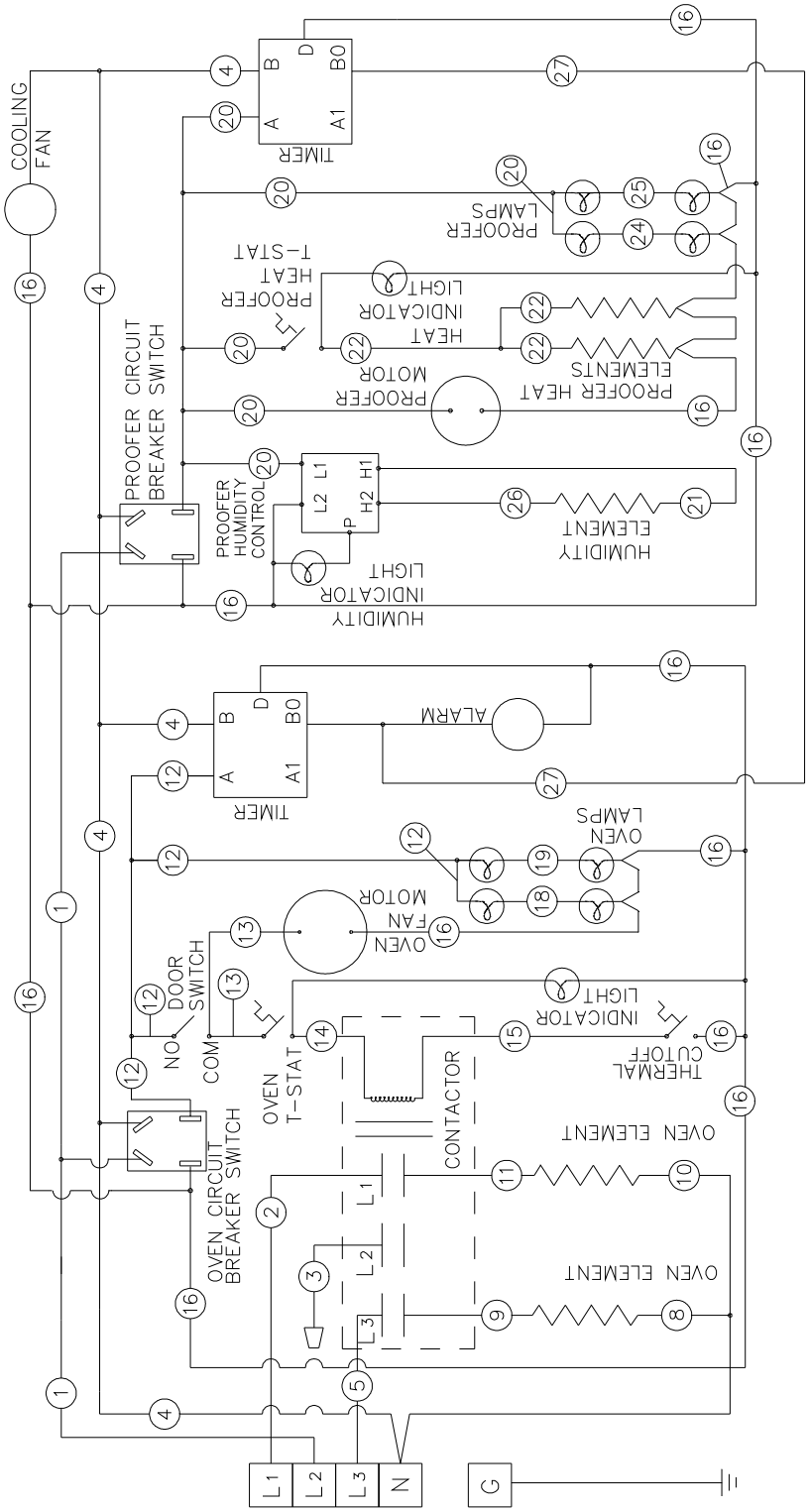
None.

ELECTRICAL SCHEMATICS



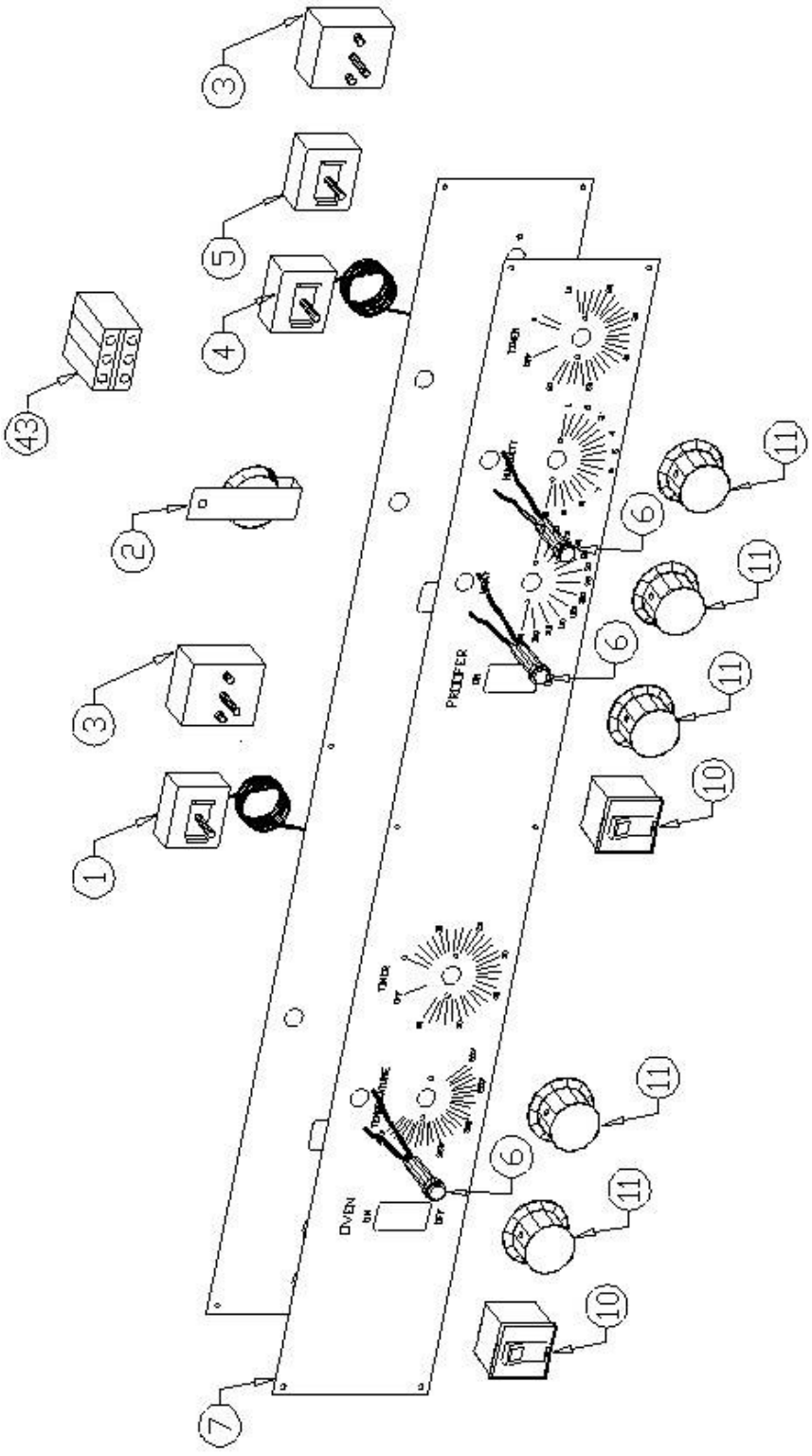
DUKE PROOFER OVEN
MODELS AHPO-6/18 & EPO-3/9
208/240 VAC 50/60 HZ 1PH & 3PH



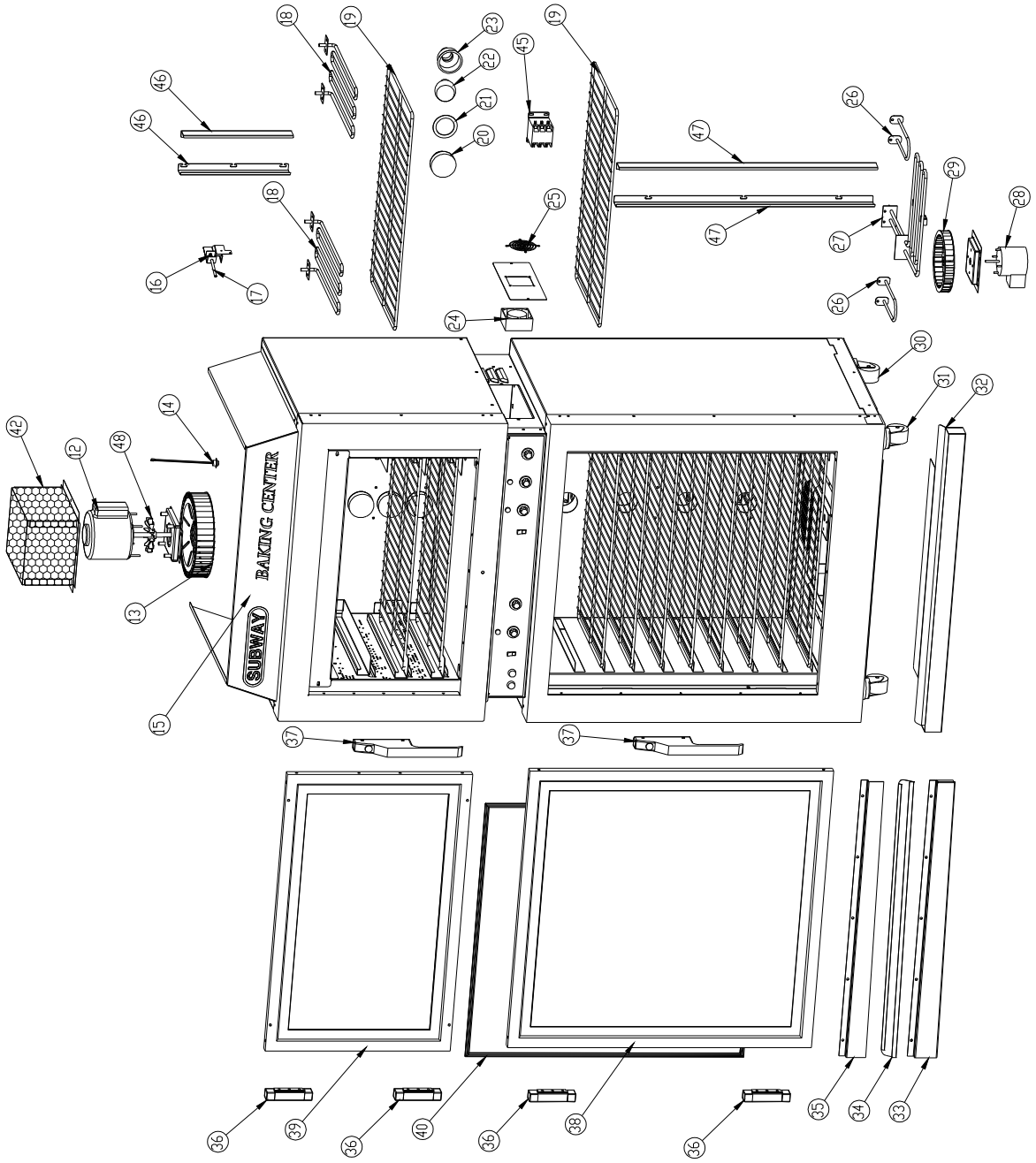


DUKE PROOFER OVEN
MODELS AHPO-6/18 & EPO-3/9
220/380 3PH 50/60 HZ
240/415 3PH 50/60 HZ

REPLACEMENT PARTS



REPLACEMENT PARTS



REPLACEMENT PARTS

Item #	Part #	Description
1	512852	Thermostat, Oven
2	154075	Buzzer
3	512972	Timer, 60 minute, 50 Hz
3	512971	Timer, 60 minute, 60 Hz
4	512850	Thermostat, proofer
5	512948	Switch, Infinite 208V
5	512949	Switch, Infinite 240V
6	512068	Light, indicator
7	502190	Mylar, AHPO 6/18 control panel
10	502805	Switch, circuit breaker
11	153142	Knob
12	154470	Motor Oven – 230V
13	154039	Blower Wheel, Oven
14	512855	Thermostat, high limit w/leads
14	502177	Thermostat, high limit
15	512888	Mylar, Subway
16	512843	Compression spring, door switch assembly
17	512821	Plunger rod, door switch
18	154373	Element, Oven 208V 2500W
18	154375	Element, Oven 240V 2500W
19	154547	Wire rack
20	156040	Lens, Glass Light
21	156041	Gasket, lens
22	156029	Bulb, light, 120V, 40 Watt
22	502341	Bulb, light, 230V, 40 Watt
23	154434	Holder, lamp
23	502342	Fixture, Light Assembly, 230V
24	512955	Cooling fan
25	512956	Fan guard
26	512895	Element, 250 watt, 208V, proofer
26	512849	Element, 250 watt, 240V, proofer
27	600102	Kit, Element, 450 watt, 208V, humidity proofer
27	600103	Kit, Element, 450 watt, 240V, humidity proofer
28	512872	Motor, proofer – 208/240 volt
29	154019	Blower, forward curve, proofer
30	512836	Castor, swivel
31	512835	Castor, locking w/brake
32	512935	Drip pan
33	155977	Housing, drip edge – left hinged door
33	155979	Housing, drip edge – right hinged door
34	155981	Gutter, drip edge
35	155976	Channel, drip edge – left hinged door
35	155978	Channel, drip edge – right hinged door
36	512817	Hinge, door
37	512905	Handle & latch assembly
38	512909	Proofer door assembly
39	512910	Oven door assembly
40	512914	Gasket, proofer door
41	512913	Gasket, oven door
42	502180	Cover, Motor
43	512840	Terminal Block, 3 Pole
43	512941	Terminal Block, 4 Pole
44*	502195	Cover Access
45	512833	Contactor, 30 A
46	502744	Guard, Oven Light
47	502745	Guard, Proofer Light
48	502338	Fan, Motor

* Not Shown